Access DB# 96077

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Chris Brandon Examiner #: 78669 Date: 9/11/02
Art Unit: 1772 Phone Number 30 5-0410 Serial Number: 09/830625
Mail Box and Bldg/Room Location CP3 11A15 Results Format Preferred (circle): PAPER DISK E-MAIL

If m r than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc. if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Insulating arrangement for the inner insulation of an aircraft

Inventors (please provide full names): Gerhard Schmitz, Matthias Witschke, Rainer Mueller, Petra Turanski, Heiko Luetjens

Earliest Priority Filing Date: October 28, 1998

****For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.***

looking for the film (5) in the claims.

The same film has a high diffusion resistance coefficient in one direction and a low diffusion resistance coefficient in the other direction for the same gases. Attached are the claims ~~the~~ specifically claims 1 and 2 are most affected by this film.

BEST AVAILABLE COPY

****

STAFF USE ONLY	**Type of Search**	**Vendors and cost where applicable**
Searcher: K. Fuller	NA Sequence (#)	STN ✓
Searcher Phone #:	AA Sequence (#)	Dialog
Searcher Location:	Structure (#)	Questel/Orbit
Date Searcher Picked Up:	Bibliographic ✓	Dr.Link
Date Completed: 9/24	Litigation	Lexis/Nexis
Searcher Prep & Review Time: 20	Fulltext	Sequence Systems
Clerical Prep Time:	Patent Family	WWW/Internet
Online Time: 77	Other	Other (specify)

PTO-1590 (8-01)

EIC1700
Search Results
Feedback Form (Optional)

Scientific & Technical Information Center

The search results generated for your recent request are attached. If you have any questions or comments (compliments or complaints) about the scope or the results of the search, please contact *the EIC searcher* who conducted the search *or contact*:

Kathleen Fuller, Team Leader, 308-4290, CP3/4 3D62

Voluntary Results Feedback Form

- *I am an examiner in Workgroup:* ☐ *Example:* 1713
- *Relevant prior art found, search results used as follows:*
  - ☐ 102 rejection
  - ☐ 103 rejection
  - ☐ Cited as being of interest.
  - ☐ Helped examiner better understand the invention.
  - ☐ Helped examiner better understand the state of the art in their technology.

  Types of relevant prior art found:
  - ☐ Foreign Patent(s)
  - ☐ Non-Patent Literature
    (journal articles, conference proceedings, new product announcements etc.)
- *Relevant prior art not found*:
  - ☐ Results verified the lack of relevant prior art (helped determine patentability).
  - ☐ Search results were not useful in determining patentability or understanding the invention.

Other Comments:

Drop off completed forms in CP3/4 - 3D62 .

```
=> FILE WPIX
FILE 'WPIX' ENTERED AT 17:10:06 ON 24 SEP 2002
COPYRIGHT (C) 2002 THOMSON DERWENT

FILE LAST UPDATED: 19 SEP 2002              <20020919/UP>
MOST RECENT DERWENT UPDATE            200260   <200260/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> SLART (Simultaneous Left and Right Truncation) is now
    available in the /ABEX field. An additional search field
    /BIX is also provided which comprises both /BI and /ABEX <<<

>>> The BATCH option for structure searches has been
    enabled in WPINDEX/WPIDS and WPIX  <<<

>>> PATENT IMAGES AVAILABLE FOR PRINT AND DISPLAY <<<

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES,
    SEE http://www.derwent.com/dwpi/updates/dwpicov/index.html <<<

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,
    PLEASE VISIT:
 http://www.stn-international.de/training_center/patents/stn_guide.pdf <<<

>>> FOR INFORMATION ON ALL DERWENT WORLD PATENTS INDEX USER
    GUIDES, PLEASE VISIT:
    http://www.derwent.com/userguides/dwpi_guide.html <<<

=> D QUE L33
L1             8 SEA FILE=REGISTRY ABB=ON  PPS/CN
L3             3 SEA FILE=REGISTRY ABB=ON  L1 AND PMS/CI
L4             2 SEA FILE=REGISTRY ABB=ON  L3 NOT PYRIDIN?
L7           263 SEA FILE=HCAPLUS ABB=ON  HIGH(1A)DIFFUS? AND LOW(1A)DIFFUS?
L15           76 SEA FILE=WPIX ABB=ON  L7 AND FILM#
L16           46 SEA FILE=WPIX ABB=ON  L15 AND INSULAT?
L17            0 SEA FILE=WPIX ABB=ON  L16 AND B64C?/IC
L18            0 SEA FILE=WPIX ABB=ON  L16 AND F16L059?/IC
L19          166 SEA FILE=WPIX ABB=ON  DIFFUS?(2A)(DIFFEREN? OR HIGH OR LOW)
                 AND FILM#(2A)(2 OR TWO OR FIRST OR SECOND OR 1ST OR 2ND)
L20            1 SEA FILE=WPIX ABB=ON  L19 AND F16L059?/IC
L21            1 SEA FILE=WPIX ABB=ON  L19 AND B64C?/IC
L22          100 SEA FILE=WPIX ABB=ON  L19 AND INSULAT?
L23            1 SEA FILE=WPIX ABB=ON  L20 OR L21
L24            1 SEA FILE=WPIX ABB=ON  L22 AND (OPPOSIT? OR OPPOS?)(2A)DIRECTION
                 ?
L25            1 SEA FILE=WPIX ABB=ON  L23 OR L24
L26            4 SEA FILE=WPIX ABB=ON  L22 AND (PLANE# OR AEROPLAN? OR AIRPLANE#
                  OR AIRCRAFT# OR AIR VEHICLE#)
L27         5302 SEA FILE=WPIX ABB=ON  L4 OR PPS OR POLYPHENYL?(W)(SULFIDE# OR
                 SULPHIDE#)
L28            0 SEA FILE=WPIX ABB=ON  L16 AND L27
L29            1 SEA FILE=WPIX ABB=ON  L19 AND L27
L30            2 SEA FILE=WPIX ABB=ON  (L19 OR L22) AND FILM?(2A)PACK?
L31            1 SEA FILE=WPIX ABB=ON  L26 NOT SHEET?(1A)PLANE#
L33            2 SEA FILE=WPIX ABB=ON  L17 OR L18 OR L20 OR L21 OR (L23 OR L24
                 OR L25) OR (L28 OR L29 OR L30 OR L31)


=> FILE JAPIO
FILE 'JAPIO' ENTERED AT 17:10:19 ON 24 SEP 2002
```

FILE LAST RELOADED: 25 AUG 2002
FILE COVERS APR 1973 TO MAY 31, 2002

>>> JAPIO has been reloaded on August 25 and saved answer sets
will no longer be valid. SEE HELP RLO for details <<<

```
=> D QUE L34
L1              8 SEA FILE=REGISTRY ABB=ON  PPS/CN
L3              3 SEA FILE=REGISTRY ABB=ON  L1 AND PMS/CI
L4              2 SEA FILE=REGISTRY ABB=ON  L3 NOT PYRIDIN?
L7            263 SEA FILE=HCAPLUS ABB=ON  HIGH(1A)DIFFUS? AND LOW(1A)DIFFUS?
L15            76 SEA FILE=WPIX ABB=ON  L7 AND FILM#
L16            46 SEA FILE=WPIX ABB=ON  L15 AND INSULAT?
L17             0 SEA FILE=WPIX ABB=ON  L16 AND B64C?/IC
L18             0 SEA FILE=WPIX ABB=ON  L16 AND F16L059?/IC
L19           166 SEA FILE=WPIX ABB=ON  DIFFUS?(2A)(DIFFEREN? OR HIGH OR LOW)
                  AND FILM#(2A)(2 OR TWO OR FIRST OR SECOND OR 1ST OR 2ND)
L20             1 SEA FILE=WPIX ABB=ON  L19 AND F16L059?/IC
L21             1 SEA FILE=WPIX ABB=ON  L19 AND B64C?/IC
L22           100 SEA FILE=WPIX ABB=ON  L19 AND INSULAT?
L23             1 SEA FILE=WPIX ABB=ON  L20 OR L21
L24             1 SEA FILE=WPIX ABB=ON  L22 AND (OPPOSIT? OR OPPOS?)(2A)DIRECTION
                  ?
L25             1 SEA FILE=WPIX ABB=ON  L23 OR L24
L26             4 SEA FILE=WPIX ABB=ON  L22 AND (PLANE# OR AEROPLAN? OR AIRPLANE#
                   OR AIRCRAFT# OR AIR VEHICLE#)
L27          5302 SEA FILE=WPIX ABB=ON  L4 OR PPS OR POLYPHENYL?(W)(SULFIDE# OR
                  SULPHIDE#)
L28             0 SEA FILE=WPIX ABB=ON  L16 AND L27
L29             1 SEA FILE=WPIX ABB=ON  L19 AND L27
L30             2 SEA FILE=WPIX ABB=ON  (L19 OR L22) AND FILM?(2A)PACK?
L31             1 SEA FILE=WPIX ABB=ON  L26 NOT SHEET?(1A)PLANE#
L34             4 SEA FILE=JAPIO ABB=ON  L17 OR L18 OR L20 OR L21 OR (L23 OR L24
                  OR L25) OR (L28 OR L29 OR L30 OR L31)
```

```
=> FILE JICST
FILE 'JICST-EPLUS' ENTERED AT 17:10:28 ON 24 SEP 2002
```


FILE COVERS 1985 TO 24 SEP 2002 (20020924/ED)

THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED
TERM (/CT) THESAURUS RELOAD.

```
=> D QUE L35
L1              8 SEA FILE=REGISTRY ABB=ON  PPS/CN
L3              3 SEA FILE=REGISTRY ABB=ON  L1 AND PMS/CI
L4              2 SEA FILE=REGISTRY ABB=ON  L3 NOT PYRIDIN?
L7            263 SEA FILE=HCAPLUS ABB=ON  HIGH(1A)DIFFUS? AND LOW(1A)DIFFUS?
L15            76 SEA FILE=WPIX ABB=ON  L7 AND FILM#
L16            46 SEA FILE=WPIX ABB=ON  L15 AND INSULAT?
L17             0 SEA FILE=WPIX ABB=ON  L16 AND B64C?/IC
L18             0 SEA FILE=WPIX ABB=ON  L16 AND F16L059?/IC
L19           166 SEA FILE=WPIX ABB=ON  DIFFUS?(2A)(DIFFEREN? OR HIGH OR LOW)
                  AND FILM#(2A)(2 OR TWO OR FIRST OR SECOND OR 1ST OR 2ND)
L20             1 SEA FILE=WPIX ABB=ON  L19 AND F16L059?/IC
```

```
L21            1 SEA FILE=WPIX ABB=ON  L19 AND B64C?/IC
L22          100 SEA FILE=WPIX ABB=ON  L19 AND INSULAT?
L23            1 SEA FILE=WPIX ABB=ON  L20 OR L21
L24            1 SEA FILE=WPIX ABB=ON  L22 AND (OPPOSIT? OR OPPOS?)(2A)DIRECTION
                 ?
L25            1 SEA FILE=WPIX ABB=ON  L23 OR L24
L26            4 SEA FILE=WPIX ABB=ON  L22 AND (PLANE# OR AEROPLAN? OR AIRPLANE#
                  OR AIRCRAFT# OR AIR VEHICLE#)
L27         5302 SEA FILE=WPIX ABB=ON  L4 OR PPS OR POLYPHENYL?(W)(SULFIDE# OR
                 SULPHIDE#)
L28            0 SEA FILE=WPIX ABB=ON  L16 AND L27
L29            1 SEA FILE=WPIX ABB=ON  L19 AND L27
L30            2 SEA FILE=WPIX ABB=ON  (L19 OR L22) AND FILM?(2A)PACK?
L31            1 SEA FILE=WPIX ABB=ON  L26 NOT SHEET?(1A)PLANE#
L35            0 SEA FILE=JICST-EPLUS ABB=ON  L17 OR L18 OR L20 OR L21 OR (L23
                 OR L24 OR L25) OR (L28 OR L29 OR L30 OR L31)


=> FILE COMPENDEX
FILE 'COMPENDEX' ENTERED AT 17:10:39 ON 24 SEP 2002
Compendex Compilation and Indexing (C) 2002
Elsevier Engineering Information Inc (EEI). All rights reserved.
Compendex (R) is a registered Trademark of Elsevier Engineering Information Inc.

FILE LAST UPDATED: 16 SEP 2002      <20020916/UP>
FILE COVERS 1970 TO DATE.


=> D QUE L40
L1             8 SEA FILE=REGISTRY ABB=ON  PPS/CN
L3             3 SEA FILE=REGISTRY ABB=ON  L1 AND PMS/CI
L4             2 SEA FILE=REGISTRY ABB=ON  L3 NOT PYRIDIN?
L7           263 SEA FILE=HCAPLUS ABB=ON  HIGH(1A)DIFFUS? AND LOW(1A)DIFFUS?
L15           76 SEA FILE=WPIX ABB=ON  L7 AND FILM#
L16           46 SEA FILE=WPIX ABB=ON  L15 AND INSULAT?
L17            0 SEA FILE=WPIX ABB=ON  L16 AND B64C?/IC
L18            0 SEA FILE=WPIX ABB=ON  L16 AND F16L059?/IC
L19          166 SEA FILE=WPIX ABB=ON  DIFFUS?(2A)(DIFFEREN? OR HIGH OR LOW)
                 AND FILM#(2A)(2 OR TWO OR FIRST OR SECOND OR 1ST OR 2ND)
L20            1 SEA FILE=WPIX ABB=ON  L19 AND F16L059?/IC
L21            1 SEA FILE=WPIX ABB=ON  L19 AND B64C?/IC
L22          100 SEA FILE=WPIX ABB=ON  L19 AND INSULAT?
L23            1 SEA FILE=WPIX ABB=ON  L20 OR L21
L24            1 SEA FILE=WPIX ABB=ON  L22 AND (OPPOSIT? OR OPPOS?)(2A)DIRECTION
                 ?
L25            1 SEA FILE=WPIX ABB=ON  L23 OR L24
L26            4 SEA FILE=WPIX ABB=ON  L22 AND (PLANE# OR AEROPLAN? OR AIRPLANE#
                  OR AIRCRAFT# OR AIR VEHICLE#)
L27         5302 SEA FILE=WPIX ABB=ON  L4 OR PPS OR POLYPHENYL?(W)(SULFIDE# OR
                 SULPHIDE#)
L28            0 SEA FILE=WPIX ABB=ON  L16 AND L27
L29            1 SEA FILE=WPIX ABB=ON  L19 AND L27
L30            2 SEA FILE=WPIX ABB=ON  (L19 OR L22) AND FILM?(2A)PACK?
L31            1 SEA FILE=WPIX ABB=ON  L26 NOT SHEET?(1A)PLANE#
L36            0 SEA FILE=COMPENDEX ABB=ON  L17 OR L18 OR L20 OR L21 OR (L23 OR
                 L24 OR L25) OR (L28 OR L29 OR L30 OR L31)
L37          533 SEA FILE=COMPENDEX ABB=ON  FILM# AND DIFFUS? AND INSULAT?
L38            1 SEA FILE=COMPENDEX ABB=ON  L37 AND FILM?(2A)PACK?
L39            0 SEA FILE=COMPENDEX ABB=ON  FILM# AND DIFFUS? AND INSULAT?(2A)PA
                 CK?
```

```
L40            1 SEA FILE=COMPENDEX ABB=ON  L36 OR L38 OR L39
```

```
=> FILE RAPRA
FILE 'RAPRA' ENTERED AT 17:11:02 ON 24 SEP 2002
```


```
FILE LAST UPDATED: 17 SEP 2002      &lt;20020917/UP&gt;
FILE COVERS 1972 TO DATE

>>> The RAPRA Classification Code is available as a PDF file
>>> and may be downloaded free-of-charge from:
>>> http://www.stn-international.de/stndatabases/details/rapra_classcodes.pdf

=> D QUE L41
L1             8 SEA FILE=REGISTRY ABB=ON  PPS/CN
L3             3 SEA FILE=REGISTRY ABB=ON  L1 AND PMS/CI
L4             2 SEA FILE=REGISTRY ABB=ON  L3 NOT PYRIDIN?
L7           263 SEA FILE=HCAPLUS ABB=ON  HIGH(1A)DIFFUS? AND LOW(1A)DIFFUS?
L15           76 SEA FILE=WPIX ABB=ON  L7 AND FILM#
L16           46 SEA FILE=WPIX ABB=ON  L15 AND INSULAT?
L17            0 SEA FILE=WPIX ABB=ON  L16 AND B64C?/IC
L18            0 SEA FILE=WPIX ABB=ON  L16 AND F16L059?/IC
L19          166 SEA FILE=WPIX ABB=ON  DIFFUS?(2A)(DIFFEREN? OR HIGH OR LOW)
                 AND FILM#(2A)(2 OR TWO OR FIRST OR SECOND OR 1ST OR 2ND)
L20            1 SEA FILE=WPIX ABB=ON  L19 AND F16L059?/IC
L21            1 SEA FILE=WPIX ABB=ON  L19 AND B64C?/IC
L22          100 SEA FILE=WPIX ABB=ON  L19 AND INSULAT?
L23            1 SEA FILE=WPIX ABB=ON  L20 OR L21
L24            1 SEA FILE=WPIX ABB=ON  L22 AND (OPPOSIT? OR OPPOS?)(2A)DIRECTION
                 ?
L25            1 SEA FILE=WPIX ABB=ON  L23 OR L24
L26            4 SEA FILE=WPIX ABB=ON  L22 AND (PLANE# OR AEROPLAN? OR AIRPLANE#
                  OR AIRCRAFT# OR AIR VEHICLE#)
L27         5302 SEA FILE=WPIX ABB=ON  L4 OR PPS OR POLYPHENYL?(W)(SULFIDE# OR
                 SULPHIDE#)
L28            0 SEA FILE=WPIX ABB=ON  L16 AND L27
L29            1 SEA FILE=WPIX ABB=ON  L19 AND L27
L30            2 SEA FILE=WPIX ABB=ON  (L19 OR L22) AND FILM?(2A)PACK?
L31            1 SEA FILE=WPIX ABB=ON  L26 NOT SHEET?(1A)PLANE#
L41            0 SEA FILE=RAPRA ABB=ON  L17 OR L18 OR L20 OR L21 OR (L23 OR L24
                  OR L25) OR (L28 OR L29 OR L30 OR L31)

=> FILE AEROSPACE
FILE 'AEROSPACE' ENTERED AT 17:11:20 ON 24 SEP 2002
```


```
 FILE COVERS 1962 TO 4 Sep 2002 (20020904/ED)

=> D QUE L50
L1             8 SEA FILE=REGISTRY ABB=ON  PPS/CN
L3             3 SEA FILE=REGISTRY ABB=ON  L1 AND PMS/CI
L4             2 SEA FILE=REGISTRY ABB=ON  L3 NOT PYRIDIN?
L7           263 SEA FILE=HCAPLUS ABB=ON  HIGH(1A)DIFFUS? AND LOW(1A)DIFFUS?
L15           76 SEA FILE=WPIX ABB=ON  L7 AND FILM#
L16           46 SEA FILE=WPIX ABB=ON  L15 AND INSULAT?
L17            0 SEA FILE=WPIX ABB=ON  L16 AND B64C?/IC
L18            0 SEA FILE=WPIX ABB=ON  L16 AND F16L059?/IC
```

```
L19          166 SEA FILE=WPIX ABB=ON  DIFFUS?(2A)(DIFFEREN? OR HIGH OR LOW)
                 AND FILM#(2A)(2 OR TWO OR FIRST OR SECOND OR 1ST OR 2ND)
L20            1 SEA FILE=WPIX ABB=ON  L19 AND F16L059?/IC
L21            1 SEA FILE=WPIX ABB=ON  L19 AND B64C?/IC
L22          100 SEA FILE=WPIX ABB=ON  L19 AND INSULAT?
L23            1 SEA FILE=WPIX ABB=ON  L20 OR L21
L24            1 SEA FILE=WPIX ABB=ON  L22 AND (OPPOSIT? OR OPPOS?)(2A)DIRECTION
                 ?
L25            1 SEA FILE=WPIX ABB=ON  L23 OR L24
L26            4 SEA FILE=WPIX ABB=ON  L22 AND (PLANE# OR AEROPLAN? OR AIRPLANE#
                  OR AIRCRAFT# OR AIR VEHICLE#)
L27         5302 SEA FILE=WPIX ABB=ON  L4 OR PPS OR POLYPHENYL?(W)(SULFIDE# OR
                 SULPHIDE#)
L28            0 SEA FILE=WPIX ABB=ON  L16 AND L27
L29            1 SEA FILE=WPIX ABB=ON  L19 AND L27
L30            2 SEA FILE=WPIX ABB=ON  (L19 OR L22) AND FILM?(2A)PACK?
L31            1 SEA FILE=WPIX ABB=ON  L26 NOT SHEET?(1A)PLANE#
L42            0 SEA FILE=AEROSPACE ABB=ON  L17 OR L18 OR L20 OR L21 OR (L23 OR
                 L24 OR L25) OR (L28 OR L29 OR L30 OR L31)
L43            0 SEA FILE=AEROSPACE ABB=ON  FILM# AND DIFFUS? AND INSULAT?(2A)PA
                 CK?
L44           34 SEA FILE=AEROSPACE ABB=ON  INSULAT?(2A)PACK?
L45            2 SEA FILE=AEROSPACE ABB=ON  L44 AND FILM#
L46         3623 SEA FILE=AEROSPACE ABB=ON  THERMAL INSULATION+NT/CT
L47          146 SEA FILE=AEROSPACE ABB=ON  L46 AND FILM#
L48            1 SEA FILE=AEROSPACE ABB=ON  DIFFUS?(2A)(DIFFEREN? OR HIGH OR
                 LOW) AND FILM#(2A)(2 OR TWO OR FIRST OR SECOND OR 1ST OR 2ND)
L49            6 SEA FILE=AEROSPACE ABB=ON  L47 AND DIFFUS?
L50            9 SEA FILE=AEROSPACE ABB=ON  (L42 OR L43) OR L45 OR (L48 OR L49)


=> FILE NTIS
FILE 'NTIS' ENTERED AT 17:11:31 ON 24 SEP 2002
Compiled and distributed by the NTIS, U.S. Department of Commerce.
It contains copyrighted material.
All rights reserved. (2002)

FILE LAST UPDATED: 21 SEP 2002      <20020921/UP>
FILE COVERS 1964 TO DATE.

>>> NTIS HAS BEEN RELOADED. PLEASE SEE HELP RLOAD
    FOR DETAILS >>>


=> D QUE L55
L1             8 SEA FILE=REGISTRY ABB=ON  PPS/CN
L3             3 SEA FILE=REGISTRY ABB=ON  L1 AND PMS/CI
L4             2 SEA FILE=REGISTRY ABB=ON  L3 NOT PYRIDIN?
L7           263 SEA FILE=HCAPLUS ABB=ON  HIGH(1A)DIFFUS? AND LOW(1A)DIFFUS?
L15           76 SEA FILE=WPIX ABB=ON  L7 AND FILM#
L16           46 SEA FILE=WPIX ABB=ON  L15 AND INSULAT?
L17            0 SEA FILE=WPIX ABB=ON  L16 AND B64C?/IC
L18            0 SEA FILE=WPIX ABB=ON  L16 AND F16L059?/IC
L19          166 SEA FILE=WPIX ABB=ON  DIFFUS?(2A)(DIFFEREN? OR HIGH OR LOW)
                 AND FILM#(2A)(2 OR TWO OR FIRST OR SECOND OR 1ST OR 2ND)
L20            1 SEA FILE=WPIX ABB=ON  L19 AND F16L059?/IC
L21            1 SEA FILE=WPIX ABB=ON  L19 AND B64C?/IC
L22          100 SEA FILE=WPIX ABB=ON  L19 AND INSULAT?
L23            1 SEA FILE=WPIX ABB=ON  L20 OR L21
```

```
L24            1 SEA FILE=WPIX ABB=ON  L22 AND (OPPOSIT? OR OPPOS?)(2A)DIRECTION
                 ?
L25            1 SEA FILE=WPIX ABB=ON  L23 OR L24
L26            4 SEA FILE=WPIX ABB=ON  L22 AND (PLANE# OR AEROPLAN? OR AIRPLANE#
                  OR AIRCRAFT# OR AIR VEHICLE#)
L27         5302 SEA FILE=WPIX ABB=ON  L4 OR PPS OR POLYPHENYL?(W)(SULFIDE# OR
                 SULPHIDE#)
L28            0 SEA FILE=WPIX ABB=ON  L16 AND L27
L29            1 SEA FILE=WPIX ABB=ON  L19 AND L27
L30            2 SEA FILE=WPIX ABB=ON  (L19 OR L22) AND FILM?(2A)PACK?
L31            1 SEA FILE=WPIX ABB=ON  L26 NOT SHEET?(1A)PLANE#
L44           34 SEA FILE=AEROSPACE ABB=ON  INSULAT?(2A)PACK?
L45            2 SEA FILE=AEROSPACE ABB=ON  L44 AND FILM#
L46         3623 SEA FILE=AEROSPACE ABB=ON  THERMAL INSULATION+NT/CT
L47          146 SEA FILE=AEROSPACE ABB=ON  L46 AND FILM#
L48            1 SEA FILE=AEROSPACE ABB=ON  DIFFUS?(2A)(DIFFEREN? OR HIGH OR
                 LOW) AND FILM#(2A)(2 OR TWO OR FIRST OR SECOND OR 1ST OR 2ND)
L49            6 SEA FILE=AEROSPACE ABB=ON  L47 AND DIFFUS?
L51            0 SEA FILE=NTIS ABB=ON  L17 OR L18 OR L20 OR L21 OR (L23 OR L24
                 OR L25) OR (L28 OR L29 OR L30 OR L31)
L52           17 SEA FILE=NTIS ABB=ON  L45 OR L48 OR L49
L53            0 SEA FILE=NTIS ABB=ON  L52 AND DIFFUS?(3A)(RESIST? OR COEF?)
L54            1 SEA FILE=NTIS ABB=ON  L52 AND PERMEAB?
L55            1 SEA FILE=NTIS ABB=ON  L51 OR L53 OR L54
```

```
=> FILE EMA
FILE 'EMA' ENTERED AT 17:11:44 ON 24 SEP 2002
COPYRIGHT (C) 2002 Cambridge Scientific Abstracts (CSA)

FILE LAST UPDATED: 11 SEP 2002      &lt;20020911/UP&gt;
FILE COVERS 1986 TO DATE.

=> D QUE L58
L1             8 SEA FILE=REGISTRY ABB=ON  PPS/CN
L3             3 SEA FILE=REGISTRY ABB=ON  L1 AND PMS/CI
L4             2 SEA FILE=REGISTRY ABB=ON  L3 NOT PYRIDIN?
L7           263 SEA FILE=HCAPLUS ABB=ON  HIGH(1A)DIFFUS? AND LOW(1A)DIFFUS?
L15           76 SEA FILE=WPIX ABB=ON  L7 AND FILM#
L16           46 SEA FILE=WPIX ABB=ON  L15 AND INSULAT?
L17            0 SEA FILE=WPIX ABB=ON  L16 AND B64C?/IC
L18            0 SEA FILE=WPIX ABB=ON  L16 AND F16L059?/IC
L19          166 SEA FILE=WPIX ABB=ON  DIFFUS?(2A)(DIFFEREN? OR HIGH OR LOW)
                 AND FILM#(2A)(2 OR TWO OR FIRST OR SECOND OR 1ST OR 2ND)
L20            1 SEA FILE=WPIX ABB=ON  L19 AND F16L059?/IC
L21            1 SEA FILE=WPIX ABB=ON  L19 AND B64C?/IC
L22          100 SEA FILE=WPIX ABB=ON  L19 AND INSULAT?
L23            1 SEA FILE=WPIX ABB=ON  L20 OR L21
L24            1 SEA FILE=WPIX ABB=ON  L22 AND (OPPOSIT? OR OPPOS?)(2A)DIRECTION
                 ?
L25            1 SEA FILE=WPIX ABB=ON  L23 OR L24
L26            4 SEA FILE=WPIX ABB=ON  L22 AND (PLANE# OR AEROPLAN? OR AIRPLANE#
                  OR AIRCRAFT# OR AIR VEHICLE#)
L27         5302 SEA FILE=WPIX ABB=ON  L4 OR PPS OR POLYPHENYL?(W)(SULFIDE# OR
                 SULPHIDE#)
L28            0 SEA FILE=WPIX ABB=ON  L16 AND L27
L29            1 SEA FILE=WPIX ABB=ON  L19 AND L27
L30            2 SEA FILE=WPIX ABB=ON  (L19 OR L22) AND FILM?(2A)PACK?
L31            1 SEA FILE=WPIX ABB=ON  L26 NOT SHEET?(1A)PLANE#
L44           34 SEA FILE=AEROSPACE ABB=ON  INSULAT?(2A)PACK?
```

```
L45           2 SEA FILE=AEROSPACE ABB=ON  L44 AND FILM#
L46        3623 SEA FILE=AEROSPACE ABB=ON  THERMAL INSULATION+NT/CT
L47         146 SEA FILE=AEROSPACE ABB=ON  L46 AND FILM#
L48           1 SEA FILE=AEROSPACE ABB=ON  DIFFUS?(2A)(DIFFEREN? OR HIGH OR
                LOW) AND FILM#(2A)(2 OR TWO OR FIRST OR SECOND OR 1ST OR 2ND)
L49           6 SEA FILE=AEROSPACE ABB=ON  L47 AND DIFFUS?
L56           0 SEA FILE=EMA ABB=ON  L17 OR L18 OR L20 OR L21 OR (L23 OR L24
                OR L25) OR (L28 OR L29 OR L30 OR L31)
L57           8 SEA FILE=EMA ABB=ON  L45 OR L48 OR L49
L58           8 SEA FILE=EMA ABB=ON  L56 OR L57

=> DUP REM L33 L34 L40 L50 L55 L58
FILE 'WPIX' ENTERED AT 17:12:14 ON 24 SEP 2002
COPYRIGHT (C) 2002 THOMSON DERWENT

FILE 'JAPIO' ENTERED AT 17:12:14 ON 24 SEP 2002
COPYRIGHT (C) 2002 Japanese Patent Office (JPO)- JAPIO

FILE 'COMPENDEX' ENTERED AT 17:12:14 ON 24 SEP 2002
Compendex Compilation and Indexing (C) 2002
Elsevier Engineering Information Inc (EEI). All rights reserved.
Compendex (R) is a registered Trademark of Elsevier Engineering Information Inc.

FILE 'AEROSPACE' ENTERED AT 17:12:14 ON 24 SEP 2002
COPYRIGHT (C) 2002 Cambridge Scientific Abstracts (CSA)

FILE 'NTIS' ENTERED AT 17:12:14 ON 24 SEP 2002
Compiled and distributed by the NTIS, U.S. Department of Commerce.
It contains copyrighted material.
All rights reserved. (2002)

FILE 'EMA' ENTERED AT 17:12:14 ON 24 SEP 2002
COPYRIGHT (C) 2002 Cambridge Scientific Abstracts (CSA)
PROCESSING COMPLETED FOR L33
PROCESSING COMPLETED FOR L34
PROCESSING COMPLETED FOR L40
PROCESSING COMPLETED FOR L50
PROCESSING COMPLETED FOR L55
PROCESSING COMPLETED FOR L58
L59          25 DUP REM L33 L34 L40 L50 L55 L58 (0 DUPLICATES REMOVED)

=> D L59 ALL 1-25

L59  ANSWER 1 OF 25  WPIX (C) 2002 THOMSON DERWENT
AN   2000-340593 [30]   WPIX
DNN  N2000-255742
TI   Aircraft insulation pack enclosed in
     film uses two films offering different
     diffusion resistance in opposed directions
     notably polyphenylsulfide and plastics films..
DC   Q25 Q67
IN   LUETJENS, H; MUELLER, R; SCHMITZ, G; TURANSKI, P; WITSCHKE, M
PA   (DAIM) DAIMLER-BENZ AEROSPACE AIRBUS GMBH; (EADS-N) EADS AIRBUS GMBH
CYC  21
PI   DE 19849696   A1 20000504 (200030)*      6p    B64C001-40      <--
     WO 2000024632 A1 20000504 (200030)  DE         B64C001-40      <--
        RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
         W: CA US
     EP 1124720    A1 20010822 (200149)  DE         B64C001-40      <--
```

applicant

R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
ADT DE 19849696 A1 DE 1998-19849696 19981028; WO 2000024632 A1 WO 1999-DE3438 19991028; EP 1124720 A1 EP 1999-960833 19991028, WO 1999-DE3438 19991028
FDT EP 1124720 A1 Based on WO 200024632
PRAI DE 1998-19849696 19981028
IC ICM **B64C001-40**
ICS **F16L059-02**
AB DE 19849696 A UPAB: 20000624
NOVELTY - The **insulating** pack (1) completely enshrouded in film (5) lines only part of the interval (AB) and the film material is permeable to both gas and fluid but allows **different diffusion** behavior depending on the diffusing direction. Thus the film offers **high diffusion** resistance from the outside to the inside surface of the film and vice versa and is made up of **two** different **films** **(2**,3) fixed to one another at the edges of the respective **films** adjoining the **pack** (1) on sectors. The **first film** **(2)** promotes diffusion from the inside to the outside, as against the **second film** (3) which offers greater resistance to medium diffusing inwards from outside. The film (5) bears on a stringer (8) dividing the interval into an interior (7) and an air gap (10). An air gap (s) is left between stringer (8) and outer skin (6) so the film (5) on the stringer (8) stands clear of the inside cladding (12) and is thus surrounded by the conditioned air (11) flowing through the interior (7).

USE - **Aircraft insulation.**

ADVANTAGE - **Different diffusion** resistance of the **pack films** in **opposing directions** affords shielding against steam and moisture etc for both in-flight and grounded conditions. This keeps the pack free of retained and residual moisture for extended service and eliminates retained weight of water.

DESCRIPTION OF DRAWING(S) - The drawing shows a **two-film pack** for reduced water absorption.

pack 1
films **2**,3
outer skin 6
interior 7
stringer 8
high-moisture warm air 9
air gap 10
conditioned air 11
inner cladding 12
air gap. s
Dwg.2/3
FS GMPI
FA AB; GI

L59 ANSWER 2 OF 25 EMA COPYRIGHT 2002 CSA
AN 1999(12):B1-P-243 EMA
TI A synchrotron x-ray scattering study on thermal imidization-induced structural evolution in an aromatic polyimide.
AU Ree, M. (Pohang University of Science and Technology); Shin, T.J. (Pohang University of Science and Technology); Lee, B. (Pohang University of Science and Technology); Wang, X. (Pohang University of Science and Technology); Youn, H.S. (Pohang University of Science and Technology); Lee, K.-B. (Pohang University of Science and Technology)
SO USA. 1999 Diffraction Patterns, 9 ref.. p. 289-290
Conference: Fall Meeting, New Orleans, Louisiana, USA, 22-26 Aug. 1999
DT Conference Article
CY United States
LA English

AB Aromatic polyimides have been widely used as **insulating** and **packing films** for electronics devices because of excellent mechanical, electrical, and thermal properties. Those superior high temperature properties are primarily due to the intrinsic thermal and oxidative stability of aromatic heterocyclic structures. Morphologies of polyimides with insufficient chain flexibilities are an attractive subject to be investigated to understand the structure-property relationships because their ordered states are more favorable than the isotropic states. To improve those properties and acquire appropriate properties, information regarding both the development of morphology and the imidization kinetics is essential. The thermal imidization processing involves a complex combination of both chemical and physical events. In addition, it takes place in a very short time and the electron density variance between the amorphous and crystalline regions is so little. For these reasons, synchrotron X-ray scattering experiments are currently performed in our laboratory. In the is study, the real time X-ray scattering study was extended to poly(3,4'- oxydiphenylene pyromellitimide) (PMDA-3,4'-ODA) obtained from the polycondensation of pyromellitic dianhydride with 3,4'-oxydianiline. This polyimide shows a relatively well ordered structure in the lateral packing direction as well as in the chain direction, which might be correlated directly to its excellent properties. Here, we present new results obtained by synchrotron WAXD technique.

CC P Polymers; B1 Structural Analysis; D1 Raw Materials; A1 Constitution and Structural Hardening; P-B1; P-D1; P-A1

CT Conference Paper; Polyarylenimides: X ray analysis; Precursors; Heating rate; Molecular structure; Order disorder; Morphology; X ray diffraction; X ray scattering

L59 ANSWER 3 OF 25 EMA COPYRIGHT 2002 CSA

AN 1998(8):E7-P-70 EMA

TI Synthesis, characterization and potential applications of amorphous coatings of titanium carbide and titanium diboride.

AU Williams, W.S. (University of Illinois); Kaloyeros, A.E. (State University of New York (Albany))

SO Minerals, Metals and Materials Society/AIME, 420 Commonwealth Dr., P.O. Box 430, Warrendale, PA 15086, USA. 1998 Diffraction Patterns, Spectra, Graphs, 10 ref.. p. 269-280
Conference: Hard Coatings Based on Borides, Carbides & Nitrides: Synthesis, Characterization & Applications, San Antonio, Texas, USA, 16-19 Feb. 1998

DT Conference Article

CY United States

LA English

AB Amorphous materials have an advantage over crystalline versions: the absence of grain boundaries reduces the probability of fracture and corrosion. However, many amorphous metal alloys crystallize at moderate temperatures, thus limiting their applications. One amorphous titanium carbide (TiC) film to be described did not crystallize until 1000 deg C. The TiC film was synthesized by metal-organic chemical vapor deposition (MOCVD). The organometallic precursor molecule dissociated and left hydrogen and organic fragments which help stabilize the carbide with respect to crystallization and corrosion. The reason for its amorphous state-determined by x-ray diffraction (XRD) and transmission electron microscopy selected area diffraction (TEM/SAD)-was the low substrate temperature required, between 150-300 deg C. Pure amorphous TiC and titanium diboride (TiB sub **2**) **films** were prepared by electron-beam vaporization (EBV) of single crystal chips onto liquid-nitrogen cooled substrates; they crystallized at lower temperatures. All the films analyzed by extended x-ray absorption fine

structure (EXAFS) and extended electron energy loss fine structure (EXELFS) exhibited short-range order but no long-range order, so they could still be described as "amorphous." Potential applications of these high hardness, high melting-point, corrosion-resistant, **low** -friction and **diffusion**-resistant coatings could include bearings, cylinder linings, microcircuits and biomedical implants. (Example substrates: steel bearings, aluminum alloy engine components, and polymeric material biomedical devices.)

CC P Polymers; E7 Surface Finishing; A2 Microstructure; P-E7; P-A2

CT Conference Paper; Surgical implants: Coating; Titanium carbide: Coatings; Titanium diboride: Coatings; Chemical vapor deposition; Electron beams; Electrodeposition; Amorphous structure; Short range order; Corrosion resistance

ET C*Ti; TiC; Ti cp; cp; C cp; B*Ti; TiB; B cp

L59 ANSWER 4 OF 25 EMA COPYRIGHT 2002 CSA

AN 1995(5):D2-P-197 EMA

TI Processability characteristics of polyethylene modified with 3-(tetrabromopentadecyl)-2,4,6-tribromophenol as a flame-retardant additive.

AU Menon, A.R.R. (CSIR); Pillai, C.K.S. (CSIR); Sudha, J.D. (CSIR); Prasad, V.S. (CSIR); Brahmakumar, M. (CSIR)

SO Polym.-Plast. Technol. Eng. (May 1995) 34, (3) Graphs, Photomicrographs.$R19 ref p. 429-438
ISSN: 0360-2559

DT Journal

CY United States

LA English

AB Polyethylene (PE), a general purpose thermoplastic, finds wide-ranging applications in many areas such as **packaging films**, electrical **insulations**, housewares, pipes and tubings, etc. For certain applications such as the insulation and sheating of power cables used for off-shore mining, flame retardancy is an essential service requirement. Some of the other applications for flame-proofed polyolefins include components for TV sets and waste pipes. Flame retardancy has long been achieved by the use of additives based on compounds of elements such as phosphorus, halogen, nitrogen, antimony, aluminum, etc. However, the use of such additives should not affect the processability of the formulations adversely. This can be ensured by studying the processability characteristics of the flame-retardant modified polymer on a rheometer under conditions of temperature and shear rate simulating those of the process to be followed. The Brabender Plasticorder has been shown to be ideal equipment in this respect.

CC P Polymers; D2 Materials Development; P-D2

CT Journal Article; Polyethylenes: Compounding; Flame retardants; Shear rate; Compounding; Viscometers

L59 ANSWER 5 OF 25 NTIS COPYRIGHT 2002 NTIS

AN 1994(19):09608 NTIS Order Number: DE94756765/XAB

TI Vakuumisolering. Udredning. (Vacuum insulation. Explanation).

AU Bredsdorff, M.

CS Teknologisk Inst., Tastrup (Denmark). Energiteknologi. (075556009 9800608)

NR DE94756765/XAB; NEI-DK-1439
26p; Nov 1993

DT Report

CY Denmark

LA Danish

NTE Danish. EFP-91.

AV Order this product from NTIS by: phone at 1-800-553-NTIS (U.S.

customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
NTIS Prices: PC A03/MF A01
OS GRA&I9417; ERA9433
AB Vacuum insulation is the term applied here for a group of insulation materials constructed on the the basis of the principle that a vacuum between two surfaces increases insulation properties. The uses, construction and properties of both transparent and non-transparent vacuum insulation materials are described in detail. Heat conducting properties can be as low as 0.004 W/mK with an inner pressure of 1-10 mbar. Prices are as yet uncertain. Where plastic-**packed** vacuum **insulation** is used, the **permeability** of the plastic **film** should remain very low over the whole period of service life, and this is not always the case. Black aerogel was found to be expensive used as an insulation material and as a vacuum insulation material and was not considered to be robust in construction. Silica powder mixed with fly ash can conduct heat at 0.005 W/mK when the mixture is sufficiently homogeneous. Experiments have been made with glass **film** sealing, but the results are mechanically weak. U-values of insulation materials consisting of steel plates welded along the edges, with glass plates as spacers, can be 0.4 W/m(sup K). Vacuum panes and aerogel panes can have U-values for the whole window of 0.3 - 0.7 W/m(sup 2)K (vacuum 10(sup -7) - 10(sup -8) bar) and 0.68 W/m(sup 2)K with 40 mbar constant during a period of 3 years, respectively. Gas-filled (atmospheric air, argon or krypton) aerogel plates with many small holes filled with one of these gasses can have heat conducting properties of 0.028, 0.020 and 0.012 respectively, but are comparatively expensive.
CC 89G Construction materials, components, and equipment
89B Architectural design and environmental engineering
97J Heating and cooling systems
97G Policies, regulations, and studies
CT *Building Materials; *Energy Conservation; *Thermal Insulation; Heat Transfer; Numerical Data; Thermal Conductivity; Vacuum Systems; Windows; Tables(data)
*FOREIGN TECHNOLOGY; EDB/320107

L59 ANSWER 6 OF 25 JAPIO COPYRIGHT 2002 JPO
AN 1993-326951 JAPIO
TI MIS-TYPE FIELD EFFECT TRANSISTOR
IN IKEHATA KOICHI; KAMEI ICHIZO
PA MATSUSHITA ELECTRON CORP
PI JP 05326951 A 19931210 Heisei
AI JP 1992-128618 (JP04128618 Heisei) 19920521
PRAI JP 1992-128618 19920521
SO PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 1993
IC ICM H01L029-784
ICS H01L027-06
ICA H01L029-62
AB PURPOSE: To provide a MIS-TYPE field effect transistor which provides the effect of the electric field modification without necessitating the formation of a **low**-concentration **diffused** layer, allows no influence by the short channel effect due to fining and reduces the number of the production processes.
CONSTITUTION: An **insulating** film 8 is accumulated on the whole surfaces of a silicon substrate 1, a gate oxide **film 2** formed on the substrate 1 and a gate electrode 3, a side wall 9 formed of conductive material such as polysilicon is formed on the side **plane** of the gate electrode 3 through the **insulating**

film 8. A voltage is applied independently on the side wall 9 formed of the conductive material regardless of the voltage to be applied on the gate electrode 3 and transistor operation is performed.

L59 ANSWER 7 OF 25 EMA COPYRIGHT 2002 CSA
AN 1994(10):D2-P-1285 EMA
TI Ethylenic Copolymer and Ethylenic Copolymer Composition.
AU Toshimi, N.; Tatsuya, H.; Junichi, M.; Takuji, O.; Masami, W.; Nobuhide, I.
PI EP 572034 1 Dec. 1993
AD 28 May 1993
DT Patent
LA English
AB There are disclosed an ethylenic copolymer having a specific range for each of melt index (MI), density, a molecular weight distribution as defined by the weight-average molecular weight (M sub w)/number-average molecular weight (M sub n) ratio, width of appearance of number of branches on molecular weight, orthodichlorobenzene (ODCB) soluble portion and maximum melting point (T sub m(max)) as measured with a differential scanning calorimeter (DSC); and a composition comprising as principal components, (a) the above ethylenic copolymer and (b) an ethylene/ alpha -olefin copolymer having a specific range of each of MI, density, number of branches and T sub m(max) . The above-disclosed ethylenic copolymer is minimized in the contents of low and high branching components in spite of its having a wide distribution of molecular weight and is well balanced among the excellent properties in moldability, transparency and heat stability. Consequently, it can be effectively utilized for **films, packing** materials, heat **insulating** materials and foaming materials. Also, the above-disclosed composition is surpassingly balanced among transparency, heat sealing temperature, tear strength, etc. and is extremely useful in a variety of fields, especially packaging field.
CC P Polymers; D2 Materials Development; P-D2
CT Patent; Polyethylenes: Copolymers; Copolymers: Development; Development; Moldability; Transparency; End uses
ET T

L59 ANSWER 8 OF 25 EMA COPYRIGHT 2002 CSA
AN 2000(5):E5-D-137 EMA
TI Thermally insulated panels and methods of making them.
AU Watanabe, H.
PI EP 535977 7 Apr. 1993
AD 0 Feb. 1992
DT Patent
LA English
AB A thermally insulating panel comprises thermal **insulating** material **packed** in a sealing bag composed of an obverse face material and a reverse face material, wherein each of the obverse face material and reverse face material is preferably made of a metal foil composite plastic **film** or metal vapor deposited plastic **film**, and an additional metal foil composite plastic **film** is stuck on the outer surface or inner surface of the obverse face material, which preferably has holes, by heat bonding under pressure.
CC D Composites; E5 Joining; D-E5
CT Patent; Thermal insulation: Fabrication; Polymers: Composite materials; Laminates: Bonding; Pressure bonding

L59 ANSWER 9 OF 25 COMPENDEX COPYRIGHT 2002 EEI
AN 1991(11):134658 COMPENDEX DN 9111141457

TI Correlation between copper **diffusion** and phase change in
parylene.
AU Yang, G.-R. (Rensselaer Polytechnic Inst, Troy, NY, USA); Dabral, S.; You,
L.; McDonald, J.F.; Lu, T.-M.
SO J Electron Mater v 20 n 7 Jul 1991 p 571-576
CODEN: JECMA5 ISSN: 0361-5235
PY 1991
DT Journal
TC Experimental
LA English
AB The parylene family of polymeric **insulating** materials is of
interest in electronics because of its low dielectric constant and good
sticking properties.It is vapor depositable at low temperatures. Copper is
a good conductor and a suitable metal for an interconnection
system.Consequently, the Cu/parylene system is a promising combination for
multilayer interconnections and thin **film packaging.**To
investigate one aspect of the feasibility of using these two materials for
an interconnection scheme, the **diffusion** of copper into parylene
at elevated temperatures has been investigated using the Rutherford back
scattering technique.The chief findings of this paper are: 1.Detectable
(RBS) Cu **diffusion** starts at greater than 573 K.Higher
temperature causes more **diffusion** as expected.2.The alpha yields
beta -phase change is not the main source of the **diffusion.**3.The
copper deposited on the alpha -parylene does not **diffuse** even
after extended anneals of six hours at 573 K.Thus, the copper- alpha
-parylene interconnect system can have thermal budget allowance of more
than six hour 4.The starting phase of the PA-n affects its
diffusion resistant properties.Furthermore a thermal processing
window showing a safe half hour of vacuum annealing at soldering
temperatures has been demonstrated.(Author abstract) 18 Refs.
CC 815 Plastics & Polymeric Materials; 708 Electric & Magnetic Materials; 544
Copper & Alloys; 713 Electronic Circuits; 537 Heat Treatment
CT *POLYMERS:Thin **Films**; HEAT TREATMENT:Annealing; COPPER AND
ALLOYS:**Diffusion**; ELECTRONICS PACKAGING; INTEGRATED
CIRCUITS:Materials; DIELECTRIC MATERIALS:Thin **Films**
ST PARYLENE; MULTILAYER INTERCONNECTIONS; THIN **FILM
PACKAGING**; RUTHERFORD BACKSCATTERING; PHASE TRANSITIONS
ET Cu

L59 ANSWER 10 OF 25 EMA COPYRIGHT 2002 CSA
AN 1992(1):B2-P-36 EMA
TI X-Ray and Neutron Reflectometry for the Investigation of Polymer
Diffusion.
AU Reiter, G. (MPI fur Polymerforschung); Stamm, M. (MPI fur
Polymerforschung); Huttenbach, S. (Kernforschungsanlage Julich)
SO Fresenius' Journal of Analytical Chemistry (1991) 341, (3-4) Graphs, 14
ref. p. 284-288
ISSN: 0937-0633
DT Journal
CY Germany
LA English
AB X-ray and neutron reflectometry are novel tools for the investigation of
polymer interfaces. For this method, the high resolution on the vertical
length scale which is normally > 1 nm and the ideal applicability for the
analysis of polymer diffusion are demonstrated by showing both
simulations and measurements. The limits and difficulties are discussed.
The broadening of the interface between **two** polystyrene
films during interdiffusion slightly above the glass transition
temperature is studied. For short times, two distinct time regimes for
polymer diffusion are proven. This is achieved with a double layer system

consisting of a deuterated and a protonated polystyrene film. The roughness of the individual films is well below 1 nm.
CC P Polymers; B2 Testing and Quality Control; A2 Microstructure; P-B2; P-A2
CT Journal Article; Polystyrene resins: Diffusion; Films: Diffusion; **Diffusion**: **High** temperature effects; Interface reactions; Mixing

L59 ANSWER 11 OF 25 EMA COPYRIGHT 2002 CSA
AN 1989(3):A4-P-87 EMA
TI Polymers in Radiation-Related Technologies: Radiation Modified Polymers.
AU Chapiro, A.
CS CNRS
SO VCH Verlagsgesellschaft mbH, P.O. Box 1260/1280 D-6940 Weinheim, FRG. 1988. p. 3-17
Conference: Polymers for Advanced Technologies, Jerusalem, Israel, 16 - 21 Aug 1987
See also AN: 89(3):G2-P-80
DT Conference
LA English
AB High energy radiations represent a powerful tool for initiating various chemical reactions and, particularly in the field of polymers, a large number of new materials have been developed, or are in the process of being developed, based on irradiation technology. Such modified polymers exhibit improved properties or even properties not found elsewhere . This fast-growing area of new applications includes up-graded **insulators**, improved **packaging** materials, better processable rubbers, hot water pipes, heat-shrinkable tubings, **films** and moldings, conductive polymers, reliable safety devices based on polymers, membranes, polymers for biomedical applications, and many other. 12 ref.
CC P Polymers; A4 Irradiation; P-A4
CT Polyvinyl chlorides: Irradiation; Polyethylenes: Irradiation; Polypropylenes: Irradiation; Rubber: Irradiation; Polyvinylidene fluorides: Irradiation; Polyetherketones: Irradiation; Radiation crosslinking; Grafting

L59 ANSWER 12 OF 25 JAPIO COPYRIGHT 2002 JPO
AN 1987-243325 JAPIO
TI MANUFACTURE OF SEMICONDUCTOR INTEGRATED CIRCUIT
IN FUJITA TSUTOMU; YAMAMOTO HIROSHI; TANIMURA SHOICHI; KAKIUCHI TAKAO
PA MATSUSHITA ELECTRIC IND CO LTD
PI JP 62243325 A 19871023 Showa
AI JP 1986-86442 (JP61086442 Showa) 19860415
PRAI JP 1986-86442 19860415
SO PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 1987
IC ICM H01L021-28
ICS H01L021-88
AB PURPOSE: To avoid conductor discontinuity and enhance reliability such as electromigration resistance by a method wherein, after a contact hole is formed, a semiconductor thin film or a thin film containing metal is formed on the side surface of the contact hole and then the contact hole is selectively filled with metal.
CONSTITUTION: After a **high** concentration **diffused** layer 2 is formed in a semi conductor Si substrate 1, an **insulating** film 3 is formed and a contact hole 4 is drilled in the **insulating** film 3 to expose the diffused layer 2. Then a **2nd insulating film** 5 of thin thickness is deposited over the whole surface and succes sively a thin polycrystalline Si film 6 is formed. The polycrystalline silicon film 6 on the bottom surface of the contact hole 4 and on the flat **planes** of the 1st

and **2nd insulating films** is removed. The **2nd insulating film** on the bottom surface of the contact hole 4 is etched to expose the diffused layer 2. Gas composed of WF<SB>6</SB> diluted by Ar is made to react with the polycrystalline Si film 6 and the Si diffused layer 2 to deposit a W film 7. Then WF<SB>6</SB> is made to react with gas containing H<SB>2</SB> and W 7 is made to grow by utilizing hydrogen reduction reaction.

L59 ANSWER 13 OF 25 EMA COPYRIGHT 2002 CSA
AN 1987(8):E7-P-143 EMA
TI Metallization of Plastics. Vacuum Deposition Predominates.
AU Schwartz, L.
SO Ind. Tech. (20 Mar 1987) (603) p. 60-63
ISSN: 0150-6617
DT Journal
LA French
AB Vacuum procedures are applied over the total range of the metallized **film** market. The layers produced are fine, uniform and confer good barrier and optical properties. Most molded parts are coated in a chamber. However, electrodeposits are indispensable for applications requiring good adherence of the metal to the plastic Capacity for metallization is available that can coat 20 km long coils 2.2 m wide at a rate of 10 m/s. The metal most frequently deposited, by direct vaporization, is Al, with Zn deposits second. Polyester has been the most widely used base. Metallized plastics are used in fabrication of **packaging**, thermal **insulators**, video tape, and condensers. In the case of electrodeposits, plastic is pretreated with a sulfo-chromic reagent to promote adhesion.B.L.
CC P Polymers; E7 Surface Finishing; P-E7
CT Aluminum: Coatings; Zinc: Coatings; Polyester resins: Coating; Metallizing; Thermal insulation: Materials selection; Electric devices: Materials selection; Vacuum deposited coatings; Electrodeposition; Surface pretreatments
ET Al; Zn

L59 ANSWER 14 OF 25 AEROSPACE COPYRIGHT 2002 CSA
AN 87:031799 AEROSPACE
DN A88-19213
TI Radiative transfer in thermal insulations of hollow and coated fibers
AU WANG, K. Y.; KUMAR, SUNIL; TIEN, C. L. (California, University, Berkeley)
SO Journal of Thermophysics and Heat Transfer, (Oct 1987) Vol. 1, pp. 289-295. United States. Refs: 21.
ISSN: 0887-8722
CY United States
DT Journal
LA English
AB This paper presents a numerical study of radiative transfer in thermal insulation made of hollow cylindrical fibers and of solid fibers coated with thin dielectric **films**. The radiative properties of the **packed** fibrous **insulation** are evaluated from the single-fiber absorption and scattering characteristics that are based on electromagnetic theory. The results show that, for cases of practical interest, hollow fibers have higher backscattered radiation and higher extinction efficiency than solid fibers of the same outside diameter. Thus, insulations made of such are not only of low weight and low heat capacity, but are also more effective in preventing radiative heat loss. Coating solid fibers with thin dielectric **films** does not appreciably enhance the radiative extinction characteristics, unless the coating is thick or has a high index of refraction.(AIAA/TIS; Author)

CC 34 Fluid Mechanics and Heat Transfer
CT *DIELECTRIC PROPERTIES; *GLASS FIBERS; *PROTECTIVE COATINGS; *RADIATIVE HEAT TRANSFER; *THERMAL INSULATION; BACKSCATTERING; HOLLOW

L59 ANSWER 15 OF 25 JAPIO COPYRIGHT 2002 JPO
AN 1986-117867 JAPIO
TI MIS TYPE SEMICONDUCTOR DEVICE AND MANUFACTURE THEREOF
IN MORIYAMA ICHIRO
PA NEC CORP
PI JP 61117867 A 19860605 Showa
AI JP 1984-240061 (JP59240061 Showa) 19841114
PRAI JP 1984-240061 19841114
SO PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 1986
IC ICM H01L029-78
ICS H01L029-60
AB PURPOSE: To increase the withstand voltage sufficiently in a short channel transistor, and to enable the flattening of the transistor, by a method wherein source-drain diffused layers are formed of a **high** concentration **diffused** layer of the upper layer and a **low** concentration **diffused** layer of the lower layer, and they are so constructed that the bottom of said **low** concentration **diffused** layer is present in the **plane** almost even with the interface between the gate **insulation** film and the semiconductor substrate.
CONSTITUTION: High concentration source-drain diffused layers 5 are formed above low concentration source-drain diffused layers 4. The latter layers 4 are in contact with the semiconductor substrate 1, and the bottom of these layers 4, i.e. the diffused layer end is in the **plane** almost even with the interface between gate **insulation** **film 2** and the semiconductor substrate 1. Therefore, since the diffused layer end of the diffused layers 4 does not generate field concentration, withstand voltage becomes higher than in the MIS type semiconductor device of the conventional structure.
COPYRIGHT: (C)1986,JPO&Japio

L59 ANSWER 16 OF 25 AEROSPACE COPYRIGHT 2002 CSA
AN 85:060991 AEROSPACE
DN N86-21694
TI Study of transport properties and structure of extended-chain polymers Final Report, 1 Oct. 1979 - 31 Mar. 1983
AU BARKER, R. E., JR.; LAWLESS, K. R.; CHEN, D. Y.
CS Virginia Univ., Charlottesville.
CSS Department of Defense; United States
SO (Sep 1985). United States. HC A13/MF A02.
Contract No.: AF-AFOSR-0014-80. Report No.: AD-A162765; UVA-525631-MS86-103; AFOSR-85-1111TR.
CY United States
DT Report
LA English
AB Charge, heat, and mass transport in the Air Force's extended chain polymers (especially poly-para-phenylene benzobisthiazole PBT) are related to other electrical, thermal, mechanical nad microstructural properties of the polymers and also comparedto these very unusual, highly anisotropic Air Force materials with other materials when it is scientifically relevant or when potential applications may be involved. Special techniques were developed for making transport-property determinations on samples in the form of thin fibers and small area **films**. **Two** types of miniature cells were developed in the study of PBT transport properties. A very promising area of the research relates to an anisotropic version of the Barker-Sharbaugh weak electrolyte model for

ionic conduction in polymers. A new technique which has been termed the **diffusion** controlled-**differential** current (DCDC) method evolved from experiments related to the weak electrolyte model. This DCDC-technique looks promising as a new analytical tool.(DTIC; DTIC)
CC 27 Nonmetallic Materials
CT *ANISOTROPY; *DIFFUSION; *ELECTROLYTIC CELLS; *FIBERS; *HETEROCYCLIC COMPOUNDS; *ION CURRENTS; *MASS TRANSFER; *MECHANICAL PROPERTIES; *MICROSTRUCTURE; *MINIATURIZATION; *MOLECULAR STRUCTURE; *POLYMERIZATION; *THERMAL CONDUCTIVITY; AXES OF ROTATION; BENZENE; DESORPTION; ETHYLENE OXIDE; MODELS; SORPTION; TEMPERATURE RATIO; THICKNESS; VERTICAL ORIENTATION

L59 ANSWER 17 OF 25 JAPIO COPYRIGHT 2002 JPO
AN 1985-074636 JAPIO
TI MANUFACTURE OF SEMICONDUCTOR DEVICE
IN HIRAI MINORU; KAWAGUCHI AKIMITSU
PA SHINDENGEN ELECTRIC MFG CO LTD
PI JP 60074636 A 19850426 Showa
AI JP 1983-182330 (JP58182330 Showa) 19830930
PRAI JP 1983-182330 19830930
SO PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 1985
IC ICM H01L021-76
AB PURPOSE: To contrive the reduction of deposition process of polycrystalline Si by forming grooves to isolate insular region and coating an **insulating** film including that in the grooves with fused Si and removing the back surface of a wafer to the bottom of the grooves by polishing.
CONSTITUTION: An oxide **film 2** is formed on one surface of a P type Si wafer 1 and windows are opened. Next, anisotropic etching is done from the opened windows to form V-shaped grooves 3 and 3'. P type impurities are diffused to form a **low**-resistance **diffusion** layer 4 over the whole surface, after which an **insulating** film 5 of SiO<SB>2</SB>, Si nitride or the like is formed over the whole surface. Fused Si is dropped from the side 1 of the wafer to coat the surface with polycrystalline Si 6 and then the surface is polished to form a process reference **plane** 6a which is almost uniform. Next, the semiconductor wafer 1 is turned over and the surface is removed to the bottom of the grooves as shown by the dottedline 7. Consequently, the insular regions 1a∼1c which are isolated by the **insulating** grooves of the polycrystalline Si 6 and are supported by this Si 6.
COPYRIGHT: (C)1985,JPO&Japio

L59 ANSWER 18 OF 25 AEROSPACE COPYRIGHT 2002 CSA
AN 84:057550 AEROSPACE
DN N85-21607
TI Advanced thin **film** thermocouples
AU KREIDER, K. G.; SEMANCIK, S.; OLSON, C.
CS National Bureau of Standards, Gaithersburg, MD.
CSS US/Government; United States
SO (Oct 1984). United States. Refs: 0; Avail: CASI HC A05/MF A01. Contract No.: NASA-ORDER-C-54715-D. Report No.: NASA-CR-175541; NAS-1-26-175541; PB85-132322; NBSIR-84-2949.
CY United States
DT Report
LA English
AB The fabrication, materials characterization, and performance of thin **film** platinum rhodium thermocouples on gas turbine alloys was investigated. The materials chosen for the study were the turbine blade alloy systems MAR M200+Hf with NiCoCrAlY and FeCrAlY coatings, and vane

alloy systems MAR M509 with FeCrAlY. Research was focussed on making improvements in the problem areas of coating substrate stability, adhesion, and insulation reliability and durability. **Diffusion** profiles between the substrate and coating with and without barrier coatings of Al2O3 are reported. The relationships between fabrication parameters of thermal oxidation and sputtering of the insulator and its characterization and performance are described. The best thin **film** thermocouples were fabricated with the NiCoCrAlY coatings which were thermally oxidized and sputter coated with Al2O3.(NTIS; NTIS)
CC 35 Instrumentation and Photography
CT *ALLOYS; *COATINGS; *GAS TURBINE ENGINES; *PLATINUM; *RHODIUM; *THERMOCOUPLES; *THIN **FILMS**; DURABILITY; FABRICATION; SPUTTERING; SUBSTRATES; THERMAL **DIFFUSION**; **THERMAL INSULATION**; TURBINE BLADES

L59 ANSWER 19 OF 25 WPIX (C) 2002 THOMSON DERWENT
AN 1980-68036C [39] WPIX
TI Low-temp. sealing **film** laminate for **packaging** - comprises metallised vinyl chloride or polyolefin films laminated to each other (NL 11.9.80).
DC A14 A17 A94 P73 Q34
IN BORDINI, F; MAURI, L
PA (MOPL-N) MOPLEFAN SPA
CYC 15

PI	DE 3008422	A	19800918	(198039)*
	BE 882119	A	19800908	(198039)
	NL 8001365	A	19800911	(198039)
	GB 2044174	A	19801015	(198042)
	DK 8000960	A	19801006	(198044)
	NO 8000639	A	19801006	(198044)
	SE 8001773	A	19801013	(198044)
	FI 8000694	A	19801031	(198048)
	FR 2450691	A	19801107	(198051)
	JP 55146743	A	19801115	(198104)
	CA 1145239	A	19830426	(198320)
	US 4387135	A	19830607	(198325)
	CH 640478	A	19840113	(198407)
	AT 8001296	A	19850615	(198531)
	SE 450940	B	19870817	(198735)
	IT 1166680	B	19870506	(198939)
	NL 187384	B	19910416	(199118)

PRAI IT 1979-20852 19790309
IC B29D000-00; B32B015-08; B32B027-06; B32B027-08; B32B027-32; B65D065-38; B65D065-40; B65D085-72; C08F000-00; C08J005-12; C08L023-00; C08L027-06
AB DE 3008422 A UPAB: 19930902
The parent patent describes a **film** laminate of **two** polyolefin **films**, one of which is an oriented polypropylene film and >=1 of both films has a metallised layer in contact with the other film.

In this patent of addn. a film laminate with a thickness of 20-200 mu for packaging is claimed comprising a vinyl chloride polymer (I) and an olefin polymer film (II) and >=1 film has a metallised layer with a resistance of 1-5 OMEGA in contact with the other film.

The film has a lower sealing temp. and good resistance to gas and vapour **diffusion**, **low** UV transmittance, high antistatic properties, good resistance to perforation and sealed seams have good strength. The laminate can be used for vacuum packaging food.
FS CPI GMPI
FA AB
MC CPI: A04-E02E; A04-G01E; A12-P01; A12-S06C

L59 ANSWER 20 OF 25 AEROSPACE COPYRIGHT 2002 CSA
AN 77:045475 AEROSPACE
DN A78-40604
TI Dielectric breakdown of polyimide **film** in high-temperature region
AU NAGAO, M.; IEDA, M. (Nagoya University, Nagoya, Japan); SAWA, G. (Mie University, Mie, Japan)
SO Electrical Engineering in Japan, vol. 97, May-June 1977, p. 7-11. Translation., (Jun 1977). Japan. Refs: 15.
CY United States
DT Journal
LA English
AB The characteristics of insulation breakdown of polyimide resin **films** are investigated over the temperature range -196 C to +300 C. Emphasis is placed on identifying the breakdown mechanism in the high-temperature region. The insulation-breakdown mechanisms are determined by dividing the temperature range into three regions: region I below room temperature, region II room temperature to about 200 C, and region III above 200 C. For region I, the breakdown mechanismis electronic breakdown; for region II, standard thermal breakdown occurs, where the contribution of thermal **diffusion** from the sample is reduced with increasing temperature; for region III, impulse thermal breakdown based on ionic conductionprevails. It is concluded that if the ionic carriers can be eliminated, the heat-resistant property of the polyimide resin **film** can be further improved.(AIAA/TIS; S.D.)
CC 33 Electronics and Electrical Engineering
CT *DIELECTRIC PROPERTIES; *ELECTRICAL FAULTS; *POLYIMIDE RESINS; *POLYMERIC **FILMS**; *THERMAL RESISTANCE; ELECTRICAL MEASUREMENT; HIGH TEMPERATURE TESTS; IONIC MOBILITY; LOW TEMPERATURE TESTS; ROOM TEMPERATURE; TEMPERATURE EFFECTS; **THERMAL INSULATION**

L59 ANSWER 21 OF 25 AEROSPACE COPYRIGHT 2002 CSA
AN 77:013118 AEROSPACE
DN A77-40865
TI Heat and mass transfer in multilayer vacuum insulations
K voprosu o teplomassoperenose v sloisto-vakuumnykh izoliatsiiakh
AU MIKHALCHENKO, R. S.; PERSHIN, N. P. (Akademiia Nauk Ukrainskoi SSR, Fiziko-Tekhnicheskii Institut Nizkikh Temperatur, Kharkov, Ukrainian SSR)
SO Inzhenerno-Fizicheskii Zhurnal, vol. 32, May 1977, p. 814-821. In Russian., (May 1977). USSR. Refs: 11.
CY USSR
DT Journal
LA Russian
AB The processes of heat and mass transfer during the evacuation of two types of multilayer vacuum insulation for cryogenic vessels are analyzed. An engineering method for calculating unsteady heat and mass transfer processes is developed on the basis of expressions previously derived (1972, 1973) by the authors. Results are in good agreement with experiment. It is shown that the increase in the effective coefficient of heat transfer with increasing thickness of an insulation based on unperforated **film** is due to the increase of the gas component of heat flux.(AIAA/TIS; C.K.D.)
CC 34 Fluid Mechanics and Heat Transfer
CT *CRYOGENIC EQUIPMENT; *EVACUATING (VACUUM); *HEAT TRANSFER COEFFICIENTS; *LAMINATES; *MASS TRANSFER; *MULTILAYER INSULATION; ***THERMAL INSULATION**; **DIFFUSION** COEFFICIENT; HEAT FLUX; PRESSURE DISTRIBUTION; THERMODYNAMIC PROPERTIES; VACUUM EFFECTS

L59 ANSWER 22 OF 25 AEROSPACE COPYRIGHT 2002 CSA

AN 76:042657 AEROSPACE
DN N76-27400
TI Design and evaluation of thin metal surface insulation for hypersonic flight
AU MILLER, R. C.; PETACH, A. M.
CS Hughes Helicopters, Culver City, CA.
CSS NASA; United States
SO (Jun 1976). United States. Refs: 0; HC $4.00.
Contract No.: NAS1-13606. Report No.: NASA-CR-144914.
CY United States
DT Report
LA English
AB An all-metal insulation was studied as a thermal protection system for hypersonic vehicles. Key program goals included fabricating the **insulation** in thin **packages** which are optimized for high temperature insulation of an actively cooled aluminum structure, and the use of state-of-the-art alloys. The insulation was fabricated from 300 series stainless steel in thicknesses of 0.8 to 12 mm. The outer, 0.127 mm thick, skin was textured to accommodate thermal expansion and oxidized to increase emittance. The thin **insulating package** was achieved using an insulation concept consisting of foil radiation shields spaced within the package, and conical foil supports to carry loads from the skin and maintain package dimensions. Samples of the metal-insulation were tested to evaluate thermal insulation capability, rain and sand erosion resistance, high temperature oxidation resistance, applied load capability, and high temperature emittance.(AUTHOR; Author)
CC 26 Metallic Materials
CT *HYPERSONIC FLIGHT; *METAL SURFACES; *PROTECTIVE COATINGS; *THERMAL INSULATION; *THERMAL PROTECTION; SKIN (STRUCTURAL MEMBER); SPACE SHUTTLES; STAINLESS STEELS; THIN **FILMS**

L59 ANSWER 23 OF 25 AEROSPACE COPYRIGHT 2002 CSA
AN 76:063240 AEROSPACE
DN A78-38201
TI Composites; Meeting, Konstanz, West Germany, March 3-April 2, 1976, Reports
Verbundwerkstoffe; Tagung, Konstanz, West Germany, March 3-April 2, 1976, Berichte
CSS Foreign/Non-Government; Germany, Federal Republic of
SO Meeting sponsored by the Deutsche Gesellschaft fuer Metallkunde. Oberursel, West Germany, Deutsche Gesellschaft fuer Metallkunde, 1976. 286 p. In German. (For individual items see A78-38202 to A78-38216), (1976).
CY Germany, Federal Republic of
DT Conference
LA German
AB Rain erosion investigations in the case of erosion protection layers are considered along with a microanalytic investigation of the precipitation behavior in the case of alited and chromium alited protective **films** on nickel-base alloys andaustenitic steels, the behavior of chromium **diffusion** layers in the case of hot gas corrosion, the application of effective protective coatings against oxidation by means of sputtering on heat-resistant directionally solidified Co-Cr7C3 eutectics,silicide protective coatings with good resistance against temperature changes, and developments related to the application and the employment of metal coatings. Attention is also given to the enhancement of the deformability of brittle metals by plating, a novel loop connection for compressor blades of boron/aluminum, possibilities of surface coating for thermal insulation, the oxidation characteristicsof Al- and Y-modified eutectic Co-Cr-C-alloys with and without load, the manufacturing optimization and high-temperature characteristics in the case of

short-filament reinforced tungsten wires with and without nickel or cobalt coating, and aspectsof stereologic structural analysis for quality control and the determination of properties in the case of multiphase materials.(AIAA/TIS; G.R.)
CC 27 Nonmetallic Materials
CT *COMPOSITE MATERIALS; *CONFERENCES; *METALLURGY; ALLOYS; AUSTENITIC STAINLESS STEELS; BRITTLE MATERIALS; COMPRESSOR BLADES; CORROSION TEST LOOPS; EUTECTIC ALLOYS; METAL COATINGS; NICKEL ALLOYS; PLATING; PROTECTIVE COATINGS; QUALITY CONTROL; STRUCTURAL ANALYSIS; **THERMAL INSULATION** ; THERMAL RESISTANCE; WATER EROSION

L59 ANSWER 24 OF 25 AEROSPACE COPYRIGHT 2002 CSA
AN 74:019595 AEROSPACE
DN A74-45434
TI Analysis of the process governing the sudden thermal contact between two solids - Application to the determination of effusivity
AU BALAGEAS, D.; JAMET, J. (ONERA, Chatillon-sous-Bagneux, Hauts-de-Seine, France); BRANSIER, J. (Paris VI, Universite, Paris, France)
SO (International Conference on Heat Transfer, 5th, Tokyo, Japan, Sept. 3-7, 1974.) ONERA, TP no. 1393, 1974. 5 p., (1974). France. Refs: 6.
Report No.: ONERA--TP-NO--1393.
CY France
DT Journal
LA English
AB An analysis is made of the process governing the thermal accommodation between two solids put in contact, initially at different temperatures. By means of a mathematical model the insufficiency of the notion of the thermal contact resistance is demonstrated for the very first instant after the breakdown of thermal equilibrium. An experimental apparatus allowing a fully automated measurement of the **diffusivity** is described. Results are presented and discussed. Various applications are considered.(AUTHOR; (Author))
CC 33 Thermodynamics and Combustion
CT *ACCOMMODATION COEFFICIENT; *CONTACT RESISTANCE; *SOLID-SOLID INTERFACES; *THERMAL **DIFFUSIVITY**; *THERMAL RESISTANCE; CONDUCTIVE HEAT TRANSFER; FLUID **FILMS**; POROUS MATERIALS; SERVOCONTROL; **THERMAL INSULATION**; THERMAL STABILITY; THERMOPHYSICAL PROPERTIES

L59 ANSWER 25 OF 25 AEROSPACE COPYRIGHT 2002 CSA
AN 71:020650 AEROSPACE
DN A71-44965
TI The calculation of boundary layers for simultaneous heat and mass transfer in an evaporating liquid layer on a flat plate in parallel flow, taking into consideration variable material parameters
/Die Berechnung der Grenzschichten fuer gekoppelten Waermeuebergang und Stoffaustausch bei Verdunstung eines Fluessigkeitsfilms ueber einer parallel angestroemten Platte unter Beruecksichtigung veraenderlicher Stoffwerte/
Laminar boundary layer calculation for simultaneous heat and mass transfer in evaporating liquid layer on flat plate in parallel gas flow, considering variable material parameters
AU EISFELD, F. /DEUTSCHE FORSCHUNGS- UND
SO (Oct 1971). Germany, Federal Republic of. INTERNATIONAL JOURNAL OF HEAT AND MASS TRANSFER, VOL. 14, P. 1537-1550.; Refs: 0.
Report No.: AD-738618; DFVLR-SONDDR-158.
DT Journal
LA German
SL IN GERMAN.
CC 33 Thermodynamics and Combustion
CT *FLAT PLATES; *GAS FLOW; *LAMINAR BOUNDARY LAYER; *LAMINAR HEAT TRANSFER;

*LIQUID-VAPOR INTERFACES; *MASS TRANSFER; ENERGY DISSIPATION; FLOW VELOCITY; FLUID **FILMS**; HEAT TRANSFER COEFFICIENTS; INDEPENDENT VARIABLES; THERMAL **DIFFUSION**; **THERMAL INSULATION**; VAPORIZING